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TITLE: PHOTORESIST COMPOSITIONS COMPRISING

DIAMONDOID DERIVATIVES INVENTOR(S): SHENGGAO LIU ET AL. ATTORNEY'S DOCKET NO: 005950-844

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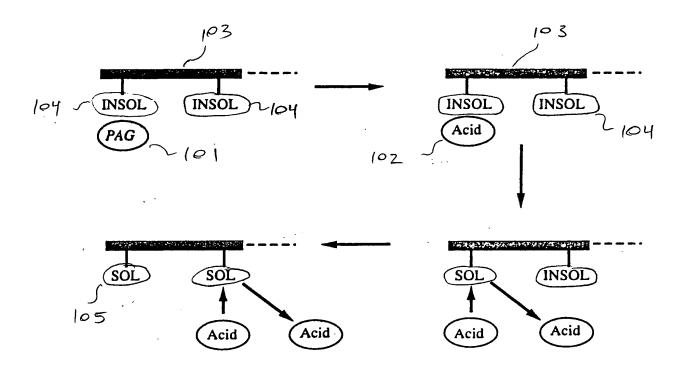
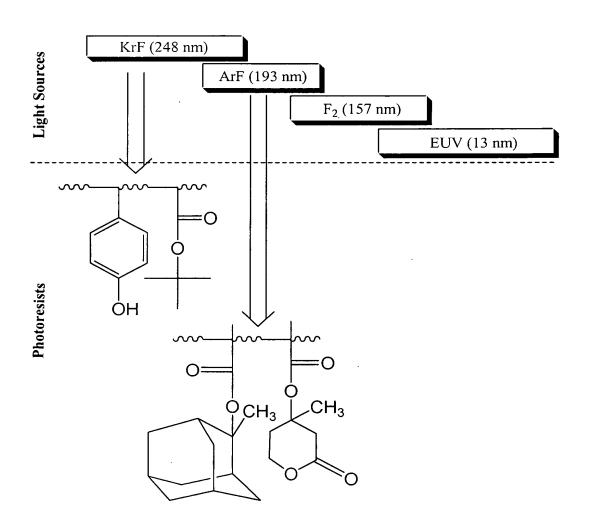


Fig. I

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FIG. 2

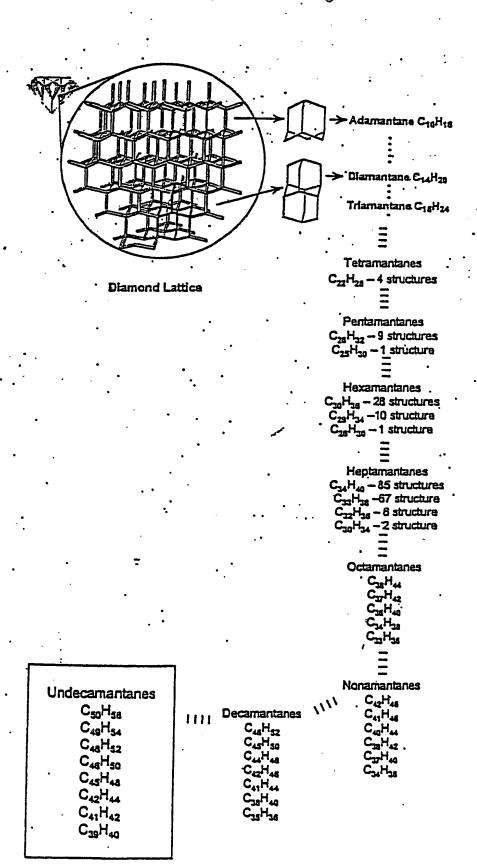


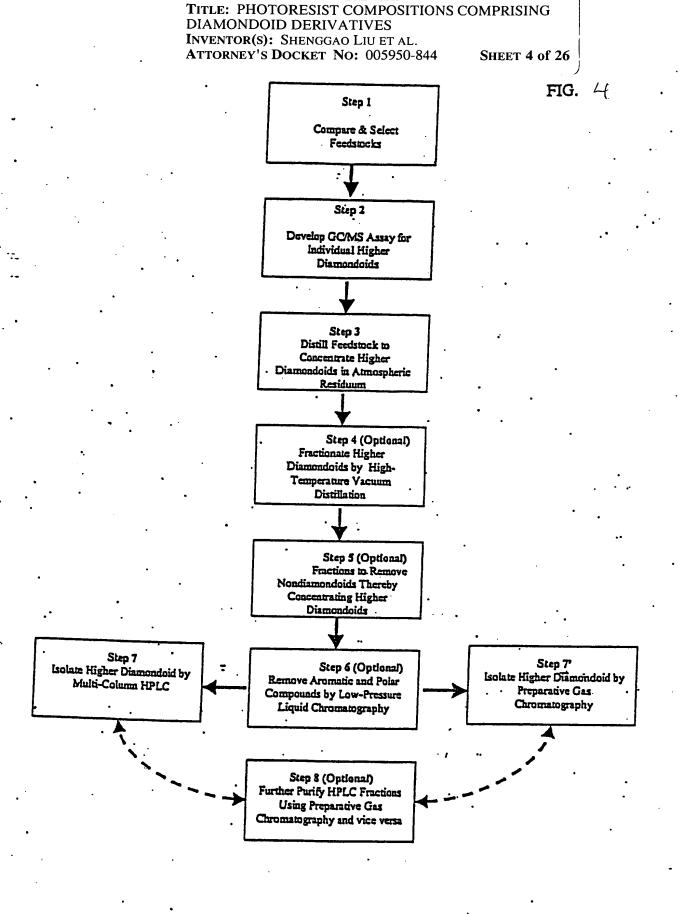
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FIG. 3





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FIG. 5A

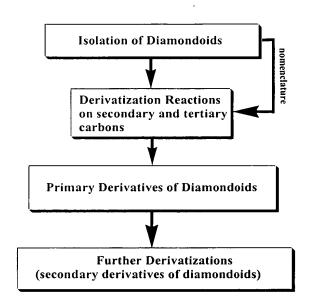
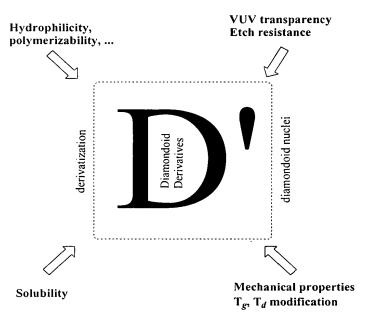


FIG. 5B



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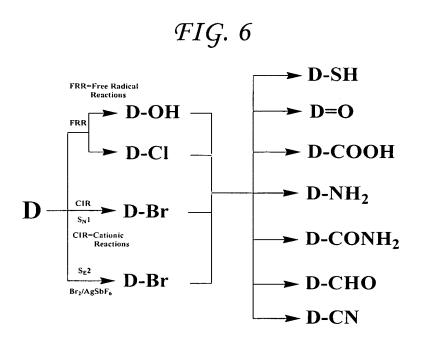
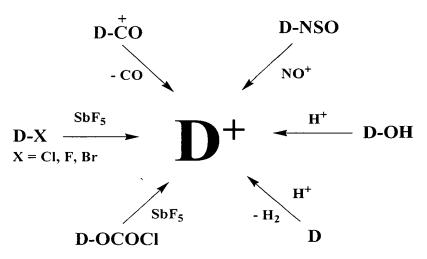


FIG. 7

Representative Ways of Generation of Diamondoid Cations (D<sup>+</sup>)



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### FIG. 8

#### Representative S<sub>N</sub>1 Reactions of Diamondoid Carbocations

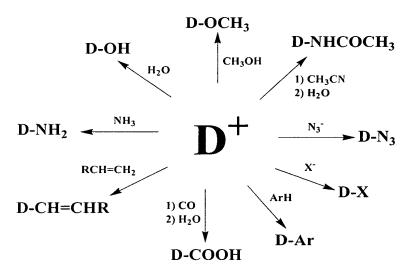
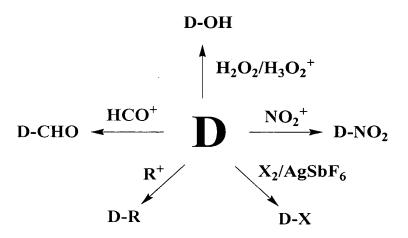


FIG. 9

#### Representative S<sub>E</sub>2 Reactions of Diamondoids



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## FIG. 10

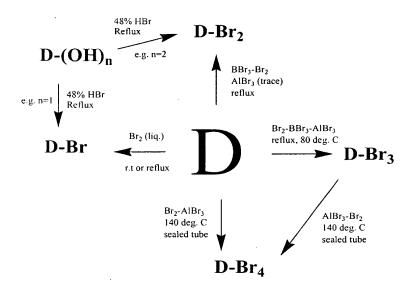
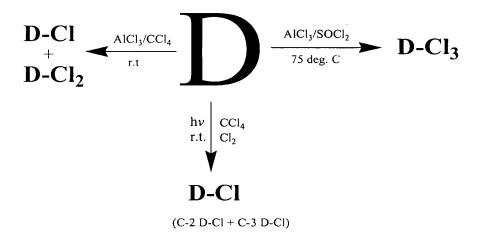


FIG. 11



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FIG. 12

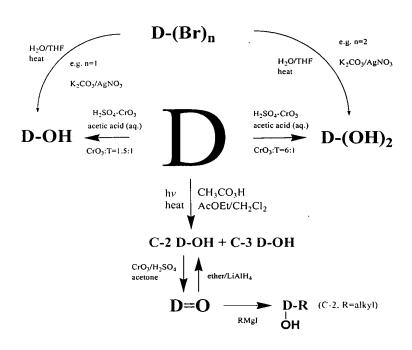
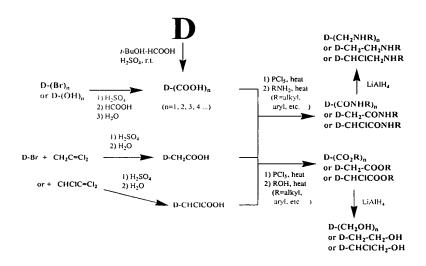


FIG. 13



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FIG. 14

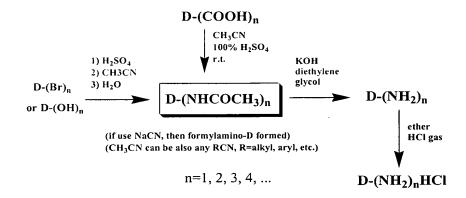
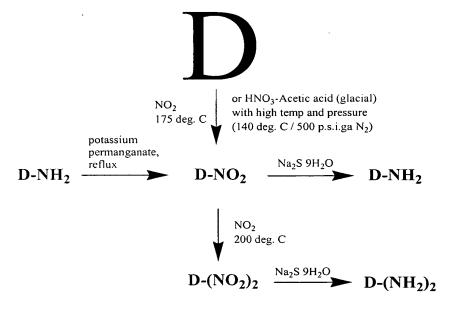


FIG. 15



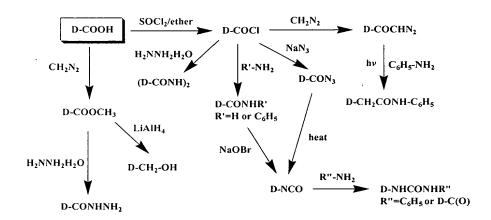
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## FIG. 16

## FIG. 17



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FIG. 18

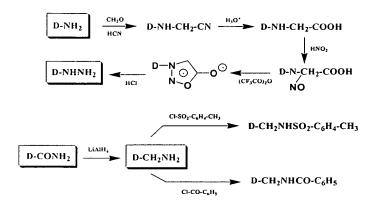
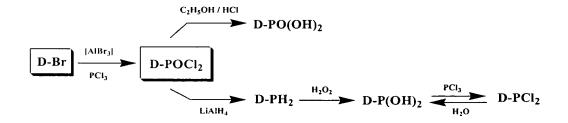
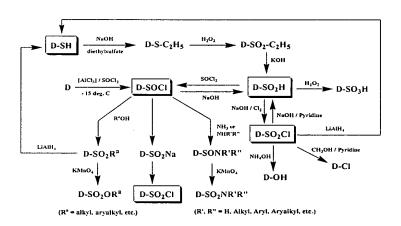


FIG. 19



**FIG. 20** 

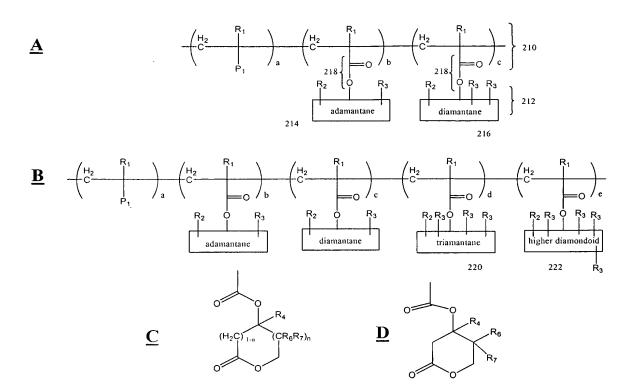


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# FIG. 21

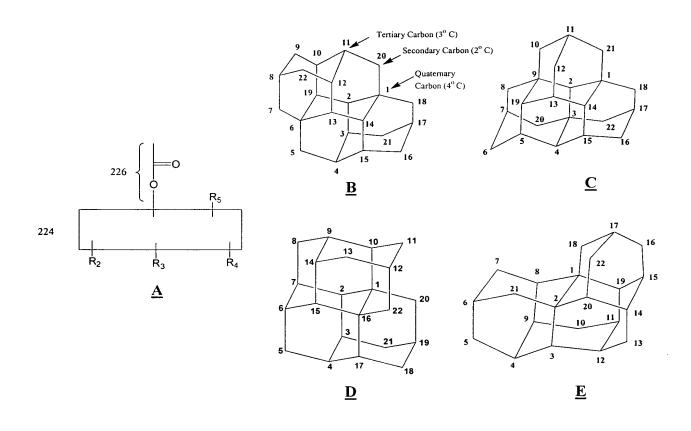


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FIG. 22



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FIG. 23

3.28

3.23

3.20

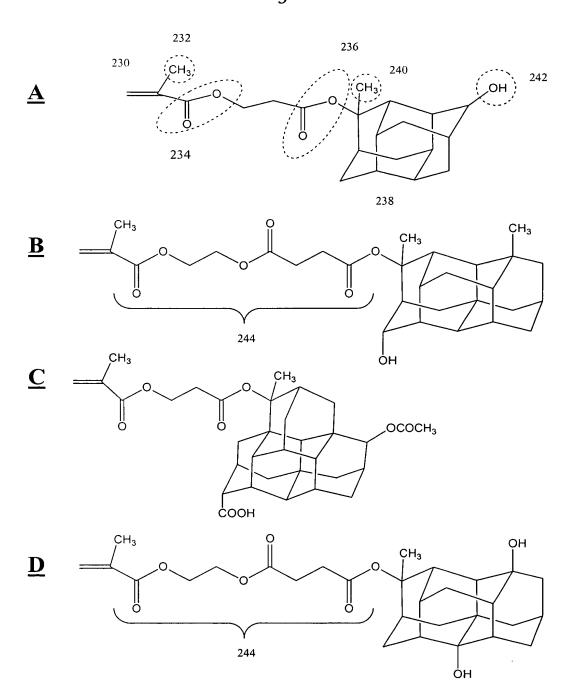
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FIG. 24



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FIG. 25

$$\underline{\mathbf{A}}$$

$$\begin{pmatrix} \mathbf{C} & \mathbf{R}_1 \\ \mathbf{H}_2 & \mathbf{P}_1 \end{pmatrix}_a \begin{pmatrix} \mathbf{C} \\ \mathbf{H}_2 \end{pmatrix}_{\mathbf{P}_1} \begin{pmatrix} \mathbf{R}_1 \\ \mathbf{H}_2 \end{pmatrix}_{\mathbf{P}_2} \begin{pmatrix} \mathbf{C} \\ \mathbf{H}_3 \end{pmatrix}_{\mathbf{R}_3} \begin{pmatrix} \mathbf{C} \\ \mathbf{H}_2 \end{pmatrix}_{\mathbf{P}_3} \begin{pmatrix} \mathbf{C} \\ \mathbf{C} \\ \mathbf{H}_2 \end{pmatrix}_{\mathbf{P}_3} \begin{pmatrix} \mathbf{C} \\ \mathbf{C} \\ \mathbf{C} \\ \mathbf{C} \end{pmatrix}_{\mathbf{P}_3} \begin{pmatrix} \mathbf{C} \\ \mathbf{C} \\ \mathbf{C} \\ \mathbf{C} \end{pmatrix}_{\mathbf{P}_3} \begin{pmatrix} \mathbf{C} \\ \mathbf{C} \\ \mathbf{C} \\ \mathbf{C} \\ \mathbf{C} \end{pmatrix}_{\mathbf{P}_3} \begin{pmatrix} \mathbf{C} \\ \mathbf{C} \\ \mathbf{C} \\ \mathbf{C} \\ \mathbf{C} \end{pmatrix}_{\mathbf{P}_3} \begin{pmatrix} \mathbf{C} \\ \mathbf{C} \\ \mathbf{C} \\ \mathbf{C} \\ \mathbf{C} \\ \mathbf{C} \end{pmatrix}_{\mathbf{P}_3} \begin{pmatrix} \mathbf{C} \\ \mathbf$$

Substrate~

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FIG. 26

$$H_2C = CH_3$$
 $H_2C = CH_3$ 
 $H_3C = CH_3$ 

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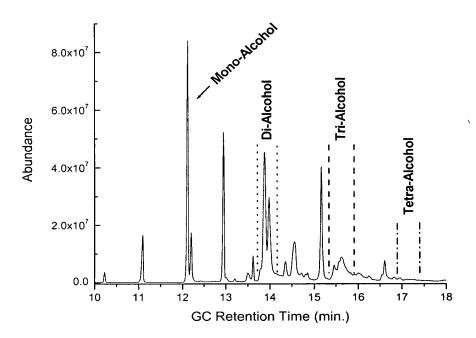
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FIG. 27

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FIG. 28

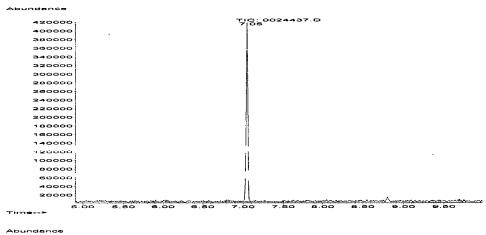


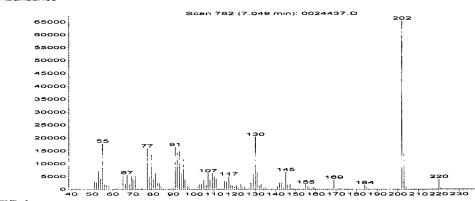
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FIG. 29



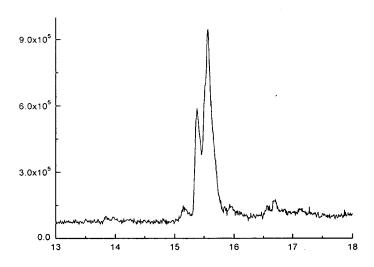


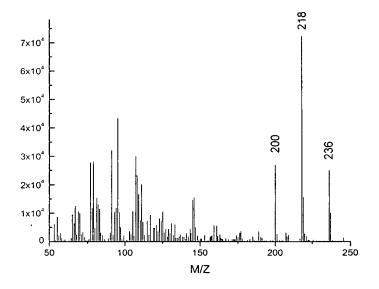
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FIG. 30

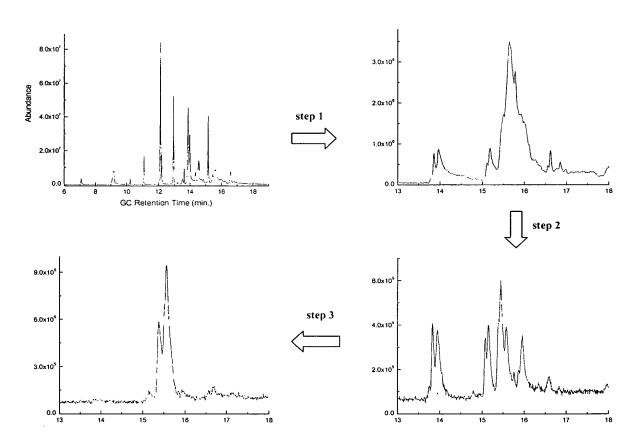




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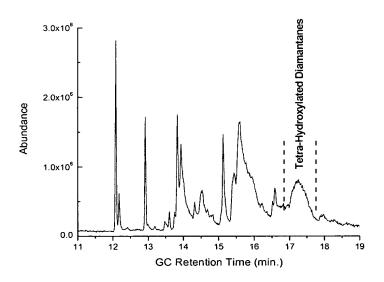
FIG. 31

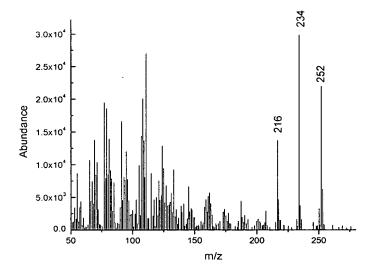


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FIG. 32





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FIG. 33A

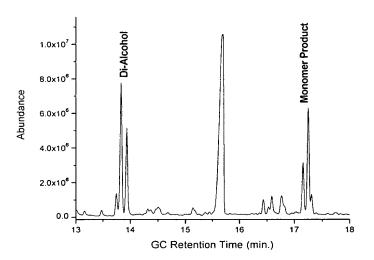
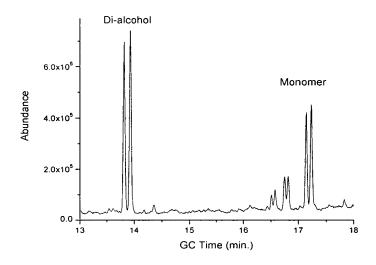


FIG. 33B

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FIG. 34

